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ABSTRACT

Public discourse on the pedagogical uses of information technology runs the gamut from utopian to apocalyptic. Two ideologies in particular have received much attention. The first, restructuralism, calls for radically restructuring postsecondary institutions from the ground up to respond effectively to social, demographic, and economic changes in society. The second, incrementalism, seeks evolutionary change as it preserves cherished principles of academic freedom, tenure, and faculty oversight. Although methods designed to achieve these ends will vary according to several factors, a foundation of common understanding based on research findings should center the debate and provide the basis for an acceptable resolution. The author addresses three questions: (1) What barriers to higher education must be removed to make its digitalized resources more universally acceptable? (2) What issues of cost and affordability must be addressed to ensure universal access? and (3) How will American higher education's reputation for quality and effectiveness be assured and maintained in the new technologically mediated environments? He then offers seven conclusions based upon research findings and ends with seven recommendations addressing the issues of access, cost, and quality. (Contains 13 references.) (PW)

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Digital Dilemma: Issues of Access, Cost, and Quality in Media-Enhanced and Distance Education

Gerald C. van Dusen

Public discourse on the pedagogical uses of information technology runs the gamut from of views from utopian to apocalyptic. A number of tacit alliances and formal partnerships between and among various ideologues have been forged with the objective of making shared views more credible to policymakers and institutional planners. Two ideologies in particular – both political constructs – have received much attention. The first, restructuralism, calls for radically restructuring postsecondary institutions from the ground up to respond effectively to social, demographic, and economic changes in society. The second, incrementalism, seeks evolutionary change as it preserves cherished principles of academic freedom, tenure, and faculty oversight. Both restructuralists and incrementalists share the conviction that institutions face "a triple challenge" of outcomes, accessibility, and costs (Ehrmann, 1995, p. 24). Although methods designed to achieve these ends will vary according to several factors, a foundation of common understanding based on research findings should center the debate and provide the basis for an acceptable resolution.

What Barriers to Higher Education Must be Removed to Make Its Digitalized Resources More Universally Acceptable?

Leveraging technology to accommodate unprecedented growth and changing demographics requires overcoming a number of daunting obstacles to universal access. For colleges and universities, universal access operates on two levels: Intranet and Internet. Universal Intranet access refers to the ability of administrators, faculty, staff, and students to access campus networks for communication, instruction, research, scholarship, public service, and business processes and procedures. Major problems associated with universal intranet access include (1) the inconsistent quality of off-campus dial-in networking services, (2) the shortcomings of campus computer labs, particularly as a critical safety net for on campus students without computer access, and (3) the escalating costs of supporting an array of on- and off-campus software options and hardware configurations (Graves, 1997). Higher education providers will be hard-pressed to achieve the important goal of universal Intranet access without an unfaltering commitment to strategic and fiscal planning.

Universal Internet access refers to the ability of society at large to access the digitalized resources inside and outside the higher education community. Currently a persisting "digital divide' exists among various income levels, demographic groups and geographic areas (Department of Commerce, 1999; Gladieux and Swail, 1999). Although Americans have increasingly embraced digital technologies, a number of specific roadblocks along the information highway must be averted. Specific barriers include age, income, race and ethnicity, gender, previous education, geography, household type, physical disabilities, and learning disabilities. Continued disengagement from the new information and communication technologies based on these factors will have profound societal consequences from which no one will be exempt. The solutions will be costly and complicated, but the alternative will be catastrophic.

What Issues of Cost and Affordability Must be Addressed to Ensure Universal Access?

Achieving the economies of scale made theoretically possible by technologically mediated instruction requires attention to a host of important issues: (1) institutional mission must be reviewed at the same time that a new vision of learning emerges, (2) intra- and interinstitutional collaboration must increase to ensure program articulation, delivery system integration, reduced duplication, maximization of limited resources, and preservation of underenrolled course offerings, (3) the cost of technology is often confused with its purchase price, but true costs are often staggeringly high—as much as ten times the purchase price, when all expenditures are factored in, (4) assigning the actual cost to such intangibles as faculty course development requires new sets of economic tools, and (5) the adoption of student technology fees and computer requirements are often not well conceived or integrated into the strategic plan for campus computing (Ringle, 1997).

How Will American Higher Education's Reputation for Quality and Effectiveness Be Assured and Maintained in the New Technologically Mediated Environments?

Pedagogical issues in today's networked digital culture involve content, design, assessment, and support. Content problems arise from the web's nonhierarchical structure and its increased commercialization (Burbles & Callister, 1998). The main design challenge facing faculty who move traditional courses to the Web or to interactive television is exploiting multimedia capabilities. Furthermore, such alternative forms of assessment—for example, authentic

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assessment and portfolio assessment may prove to be more appropriate for students in technologically mediated environments. Finally, to assist faculty with integrating technology into instruction, institutions must commit to the provision of access to technology resources for faculty training, course design, and development; standardized configurations to ensure continuity between instructional paradigms and efficient technical support services; and appropriate consideration to the teaching function in tenure and promotion decisions.

What Conclusions and Recommendations Can Be Drawn?

In the current polarized political environment, quick, easy solutions to the challenge of making higher education more accessible, more affordable, and more effective are unlikely, although research findings do permit a number of specific conclusions:

1. Successful efforts to transform American colleges and universities are very likely to occur quite differently from institutional to institution, based on institutional mandate, mission, and vision. Given increasing numbers of adult and nontraditional students, it is likely that the majority of institutions will undergo some form of significant transformation.

2. Although in many respects colleges and universities are businesses, in crucial respects they are not.

3. The historic commitment to core values in traditional undergraduate education has wavered, and the same vacillation threatens to undermine general education requirements in electronically delivered certificate and degree programs.

4. Lack of internet access results in information poverty for several classes of individuals and creates a new class of postsecondary institution.

5. Distance education is unlikely to effect institutional cost savings over the short or middle term.

6. Existing evidence on the effectiveness of media-enhanced and distance education is generally inadequate because of experimental design flaws.

7. Containing the costs of academic and administrative computing today requires a campuswide rather than departmental-level perspective.

The following seven recommendations address the pressing issues of access, cost, and quality:

1. Prepare to lobby more aggressively for state and federal policy reform of higher education issues.

2. Develop a reward system that places a high value on teaching and the innovative uses of technology, even though the two will be mutually exclusive in most cases.

3. Promote universal Intranet access to campus networks by standardizing hardware and software configurations.

4. Promote universal access to the National information Infrastructure as a vital social utility.

5. Affirm the social nature of learning.

6. Require of all students the generic skills of mediacy and numeracy.

7. Preserve the quality and core values that undergird and distinguish higher education from corporate training, even as the institutions work to untangle the knotty issues of productivity, efficiency, and effectiveness.

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